IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Desnoyers, et al.
Appl. No.	:	09/931,836
Filed	:	August 16, 2001
For	:	NOVEL PEPTIDES THAT INDUCE CHONDROCYTE REDIFFERENTIATION
Examiner	:	Jiang, Dong
Group Art Unit	:	1646

DECLARATION OF LUC DESNOYERS AND WILLIAM I. WOOD UNDER 37 CFR §1.131

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

We, Luc Desnoyers and William I. Wood, declare and state as follows:

1.   We are the inventors of the subject matter that is presently claimed in the above-captioned patent application.

2.   During the time period in which all of the events and activities described herein occurred, we were employed by Genentech, Inc., the assignee of the above-captioned application.

3.   All of the events and activities described herein were performed by us personally, or under our direction, as part of our duties as employees of Genentech, Inc.

4.   The invention claimed in the above-captioned patent application was conceived prior to April 20, 1999 and diligently reduced to practice thereafter in the U.S. as described below.

5.   Prior to April 20, 1999, we conceived of the polypeptides claimed in the above-captioned patent application. This is demonstrated by the attached sequence printout (Exhibit A), which was generated prior to April 20, 1999, and which shows the complete sequence of the polypeptide having the sequence of SEQ ID NO:2. The attached printout also shows the complete sequence of the nucleic acid which has the sequence of SEQ ID NO:1. As evidenced by the sequence printout, we were in possession of the complete polypeptide sequence prior to April 20, 1999.

6.   The date deleted from page 1 of Exhibit A is a date prior to April 20, 1999, and was redacted pursuant to M.P.E.P. § 715.07. The redacted date is the date when the data were generated; the date the report was printed, April 16, 2004, remains on the report.
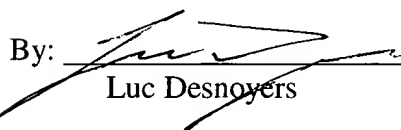
-1-

7.   After initially conceiving the polypeptide having the sequence of SEQ ID NO:2 prior to April 20, 1999, we diligently reduced the claimed subject matter to practice by working to express and purify the polypeptide and to run it systematically through many assays. The cDNA was deposited with the American Type Culture Collection (ATCC) on January 12, 1999 and assigned ATCC no. 203581. The protein of interest was assigned a "protein inventory number" (*e.g.*, PIN1308 and PIN1308-1). As set forth in the enclosed Exhibit B, the polypeptide was expressed in *E. coli* - PUR1009 (*see* page 2) on November 16, 1998; in *Baculovirus* - PUR1039 (*see* page 3) on November 23, 1998; and in mammalian cells (*see* page 4) on February 17, 1999. Furthermore, various constructs with poly-His or IgG tags were made from the time of first cloning and the construction of these was followed by expression and purification of the protein during the time period of prior to April 20, 1999 through March 13, 2003. For example, Exhibit C shows July 13, 1999 as the date of purification of a polypeptide having the sequence of SEQ ID NO:2. PIN1308 and/or PIN1308-1 were distributed to various scientists for multiple cell-based assays and/or quality confirmation tests from August 20, 1999 through January 22, 2001.
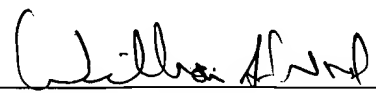
8.   Exhibits D and E list the assays performed on the purified protein. Assay ASY110, called "Chondrocyte Re-differentiation Assay" was completed on November 10, 1999 for PIN1308-1, which is a polypeptide having the sequence of SEQ ID NO:2. PIN1308-1 was delivered to Luc Desnoyers for one of the assay runs on October 22, 1999; testing was completed on November 10, 1999. Exhibit E is an assay result list that shows positive results for the assay completed on November 10, 1999, thereby confirming the ability of the claimed polypeptide to induce chondrocyte redifferentiation. Thus, actual reduction to practice occurred at least by November 10, 1999.

9.   After reducing the invention to practice, we worked with the Genentech, Inc. patent department to prepare a non-provisional patent application, which included the sequence of SEQ ID NO:2, as well as the data showing the ability to induce chondrocyte redifferentiation. That application was filed on March 1, 2000.

10.   We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information or belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful statements may jeopardize the validity of the application or any patent issued thereon.

By: _____   Date: _5/17/04_____
       Luc Desnoyers

By: _____   Date: _5/17/04_____
       William I. Wood

EXHIBIT A

(16 pages; pages 4-19)

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 1

>Friday, April 16, 2004
>DNA44686 [Full]
>584 Sites [All Sites]
>
>Sequence confirmed by phrap.

[DNA44686., sheldens]

```
                                                                                          bs
                                                                       scrFI[M.hpaII-]
                                                                    hgaI nci
                                         rmaI                        tha nspi
                                         sau3AI maeI                 fnuDII/mvnI       bs
                                         mboI/ndeII[dam-]            bstUI hpaII       mnli
                    tsp509I[M.ecoRI-]     dpnI[dam-]                 bshi236I sfaNI    bseRI
                    ecoRI                 dpnI[dam+]                 mluI dsaV         bsaI
                    taqI                  alwI[dam-] sau3AI          aflIII bssKI      avaI bs
       sfuI         niaIV xbaI mboI/ndeII[dam-]
       bst3I    mwoI  haeII:/palI bfaI dpnIII[dam-]
       bsiCI    bglII[M.haeIII-]   hpy 88III    taqI
    tfiI apoI   sfII   eaeI bstYI/xhoII dpnI[dam+]
    hinfI[M.taqI-]     cfrI bamHI[M.mspI-]   mnlI
 mnlI  taqI[M.claI-] haeIII/palI  alwI[dam-]  alwI[dam-]
 hpyCH4V  claI/bsp106  eaeI  bsrI  mspI[M.bamHI-][M.haeIII-]  taqI
 bsgI bsaJI  bspDI[dam-]  cfrI  tspRI hpaII mnlI  bstYI/xhoII mnlI drdI aflIII bssKI
1 CAACTGCGACC TCGGTTCTAT CGATTCGAAT CGGCCACAC TGGCCGGATC CTCTAGAGAT CCCTCGACCT CGACCCACGC GTCCGGGCAT CTGCCCGAGG
  GTTGACGCTGG AGCCAAGATA GCTAAGCTTA AGCCGGTGTG ACCGGCCTAG GAGAGATCTA GGGAGCTGGA GCTGGGTGCG CAGGCCCGTA GACGGGCTCC
                                                                    insert starts here^
```

Appl. No.   :   09/931,836
Filed   :   August 16, 2001

EXHIBIT A—PAGE 2

```
                                                              tseI
sstI                                                          fnu4HI/bsoFI
sacI                                                          bbvI
hgiAI/aspHI[M.alui-]
ecl136II
bsp1286I[M.alui-]
bsiHKAI
bmyI
banII[M.alui-]
scrFI[dcm-]
pspGI
mvaI aluI
ecoRII[dcm-]
dsaV[dcm-]
                  bstNI    mooII           pleI ddeI         tflI nlaIII
                  bssKI[dcm-]   dpnAI      nlyI bspCNI        hinfI  mwoI mnlI aluI        cac8I
      mwoI bpmI/gsuI[dcm-]  ddeI           hinfI mnlI
bstXI apyI[dcm+]  bbsI bspCNI bsmAI hpy188I

101 AGACCACGCT CCTGTCTTC TCAGGAGAC TCTGAGGCTC TGTTGAGAAT CATGCTTGG AGGCAGCTCA TCTATTGGCA ACTGCTGGCT
    TCTGGTGCGA GGACCTCGAG ACGACAGAAG AGTCCCCTCTG AGACTCCGAG ACAACTCTTA GTACGAACCGT AGATAACCGT TGACGACCGA
  1                                               N L M R Q L I Y W Q L L A
                                                  *MET

                                       pleI        mnlI
                                       nlyI        mspI            hpyCB4V
                                       hinfI bslI  hpaII           sfcI        bsmAI
            mnlI   hpyl88III  nlaII bsmAI   bsaNI                  pstI        nlaIII sfc

201 TTGTTTTCC TCCCTTTTG CCTGTGTCAA GATGAATACA TGGAGTCTCC ACAAACCGGA GGACTACCCC CAGACTGCAG TAAGTGTTGT CATGGAGACT
    AACAAAAAGG AGGGAAAAAC GGACACAGTT CTACTATGT ACCTCAGAGG TGTTTGGCCT CCTGATGGGG GTCTGACGTC ATTCACAACA GTACCTCTGA
 14 L F F L P F C L C Q D E Y N E S P Q T G G L P P D C S K C C H G D Y
```

GSeqEdit, DNA44686 [Full], page 2

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 3

```
                                                                        nlaIII
                                                                  rcaI
                                                            tspRI  hpyi88I
                                                      nlaIV  bsrI  bspHI
                                              btgI/bstDSI
                                  bssKI[dcm-]  bsaJI
                              bstNI  dsaI
                    ecoRI[dcm-]  styI
              mvaI  dsaV[dcm-]  ncoI
        ecoRII[dcm-]  xcmI
  pspGI       nlaIII
scrFI[dcm-]
                                                        mwoI
                                                  bglII[M.haeIII-]
                                              sau96I[M.haeIII-]
                                          sau96I[M.haeIII-]
                                      pspOMI/bsp120I
                                  nlaIV  scrFI[dcm-]
                              sau96I[dcm-][M.haeIII-]
                    scrFI[dcm-] ecco109I/draII  scrFI[dcm-]
              pspGi  scrFI[M.hpaII-]  pspGI
        mvaI  nciI  pspGI  nlaIII
  ecoRII[dcm-] haeIII/palI  ecoRII[dcm-]
dsaV[dcm-] bspI286[M.haeIII-]  xcmI
  bstNI  mspI  mvaI  dsaV[dcm-]
bssKI[dcm-] bmyI  ecoR-I[dcm-]  styI
  bsaJI  hpaII  dsaV[dcm-]  ncoI
sau96I[M.haeIII-] banII[M.haeIII-] bstNI  dsaI
xcmI n-aIV apy-[dcm+] apaI  bstNI  bssKI[dcm-]
  styI haeIII/pa-I  dsaV  bssKI[dcm-]  btgI/bstDSI
mwoI mnlI  bsaJI  ecco109I/draII  bssKI  mnlI  bsmI  apyI[dcm+]  bsaJi
aluI taqI  mwoI  bsaJ: haeIII/palI  bssKI  mnlI  bsmI  apyI[dcm+]  nlaIV bsrI bspHI
301 ACAGCTTTCG AGGCTACCAA GGCCCCCTG GGCCACCGGG CCCTCCTGGC ATTCCAGGAA ACCATGGAAA CAATGGCAAC AATGGAGCCA CTGGTCATGA
    TGTCGAAAGC TCCGATGGTT CCGGGGGAC  CCGGTGGCCC GGGAGGACCG TAAGGTCCTT GTGGTACCTT GTTACCGTTG TTACCTCGGT GACCAGTACT

48  S  F  R  G  Y  Q  G  P  P  G  P  P  G  G  I  P  G  N  H  G  N  N  G  N  N  G  A  T  G  H  E
```

GSeqEdit, DNA44686 [full], page 3

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 4

```
                                                              taqI                                                    scrFI[M.hpaII-]
                                                              xhoI                                                    nciI
                                                              tliI                                                    mspI
                                                    scrFI[dcm-]                                                       hpaII
                                                    p8pGI   snlI                                                      dsaV
                                                    mvaI haeIII/palI                                                  bssKI
                                                    ecoRII[dcm-]                                                      bsaJI
                                                    dsaV[dcm-]                                                        xmaI/pspAI
                                                    bstNI   paeR7I                                                    smaI
                                                    bssKI[dcm-]                                                       scrFI[M.hpaII-]
                                         bsaJI  mnlI        mwoI           sau96I[M.haeIII-]                           nciI
                            tsp45I sau96I[M.haeIII-]                       nlaIV                                       dsaV
                       nae II  nlaIV avaI[M.taqI-]        tseI  hae II/palI                                            bssKI  tfiI
                       hphI apyI[dcm+] mnlI bsrBI         fnu4HI/bsoFI                                                 bsaJI  hinfI
          nlaIV  hphI  bstEII  ecoO109I/draII  aclI  bbvI nlaIII                                                      avaI[M.hpaII-]
401 AGGAGCCAAA GGTGAGAAGG GCGACAAAGG TGACCTGGGG CCTCGAGGGC AGCGGGGGCA GCATGGCCCC AAAGGAGAGA ACGGCTACCC GGGGATTCCA
    TCCTCGGTTT CCACTCTTCC CGCTGTTTCC ACTGGACCCC GGAGCTCCCG TCGCCCCCGT CGTACCGGGG TTTCCTCTCT TGCCGATGGG CCCCTAAGGT
81  G  A  X  G  E  K  G  D  K  G  D  L  G  P  R  G  E  R  G  Q  H  G  P  K  G  E  K  G  Y  P  G  I  P

                mwoI                                              tspRI      eco57I
          hpy188I bsmI nlaIII                            bst4CI/hpyCH4III    tspRI    bsnAI
          eco57I  hpyCH4V  mwoI                  eco57I          hpy188I    mboII btsI    bsaI
501 CCAGAACTTC AGATTGCATT CATGGCCTCT CTGGCAACCC ACTTCAGCAA TCAGAACAGT GGGATTATCT TCAGCAGTGT TGAGACCAAC ATTGGAAACT
    GGTCTTGAAG TCTAACGTAA GTACCGGAGA GACCGTTGGG TGAAGTCGTT AGTCTTGTCA CCCTAATAGA AGTCGTCACA ACTCTGGTTG TAACCTTTGA
114 P  E  L  Q  I  A  F  M  A  S  L  A  T  H  F  S  N  Q  N  S  G  I  I  F  S  S  V  E  T  N  I  G  N  F

GSeqEdit, DNA44686 [Full], page 4
```

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 5

```
                                          sau96I[M.haeIII-]
                                          nlaIV
                                          haeIII/palI
                                          sau96I[M.haeIII-]
                                          pspOMI/bsp120I
                                          nlaIV
                                          eco0109I/draII
                                          bsp1286[M.haeIII-]
                                          bmyI
                          nlaIII          banII[M.haeIII-]                                foKI
                          rcaI            apaI  bsrI                                      mnlI
                          hpy188II        nlaIV  bslI                      hphI           nlaIII
                          bspHI bsrI      eco0109I/draII       mboII eco57I nlaIII   mslI bstF5I mnlI

601 TCTTTGATGT CATGACTGGT AGATTGGGG CCCCAGTATC AGGTGTGTAT TCTTCACCT TCAGCATGAT GAAGCATGAG GATGTTGAGG AAGTGTATGT
    AGAAACTACA GTACTGACCA TCTAAACCCC GGGGTCATAG TCCACACATA AAGAAGTGGA AGTCGTACTA CTTCGTACTC CTACAACTCC TTCACATACA

148  F  D  V  M  T  G  R  F  G  A  P  V  S  G  V  Y  F  F  T  F  S  M  M  K  H  E  D  V  E  E  V  Y  V

                                          rsaI
                                          csp6I
                                          bsp1407I/bsrGI
                                          eco57I nlaIII
                                          mboII nspI                                      rmaI
                                          bpuAI nspI              foKI                    maeI
           rsaI                           bbsI mwoI               bstF5I                  nheI[M.a
           csp6I hpyCH4V  bst4CI/hpyCH4III aluI         hpy188I   nlaIII eco57I bfaI      cacBI
                                                                                         aluI

701 GTACCCTAAG CACAATGGCA ACACAGTCTT CAGCATGTAC AGCTATGAAA TGAAGGGCAA ATCAGATACA TCCAGCAATC ATGCTGTGCT GAAGCTAGCC
    CATGGGATTC GTGTTACCGT TGTGTCAGAA GTCGTACATG TCGATACTTT ACTTCCCGTT TAGTCTATGT AGGTCGTTAG TACGACACGA CTTCGATCGG

181  Y  P  K  H  N  G  N  T  V  F  S  M  Y  S  Y  E  M  K  R  G  K  S  D  T  S  S  N  H  A  V  L  K  L  A
```

GSeqEdit, DNA44686 [Full], page 5

-8-

EXHIBIT A—PAGE 6

```
                                    nlaIII
                                    styI
                                    ncoI  sau96I
                                    dsaI  nlaIV
                   hinPI   btgI/bstDSI            tfii
             tseI  hhaI/cfoI  bsmFI               hinfI
      mnlI          bbvI  bsrDI haeII  bsaJI avaII      hpyCH4V              ddeI
      fokI  fnu4HI/bsoFI
      bstF5I
801 AAAGGGGATG AGGTTCGCT GCGAATGGGC AATGGCGCTC TCCATGGGGA CCACCAACGC TTCTCCACCT TTGCAGGATT CCTGCCCTT GAAACTAAGT
    TTCCCCTAC TCCAAACCGA CGCTTACCCG TTACCGCGAG AGGTACCCCT GGTGGTTGCG AAGAGGTGGA AAGAGGTCCTAA GGACGGGAA CTTTGATTCA
214 K  G  D  E  V  N  L  R  M  G  N  G  A  L  H  G  D  H  Q  R  F  S  T  F  A  G  F  L  L  F  E  T  K  O

                                              mnlI
                                              ddeI
                                              bspCNI
                        sau3AI
                        mboI/ndeII[dam-]
            ddeI[M.aluI-]
            bspCNI
            celII/espI       dpnII[dam-]
     rmaI   blpI/bpu10I      dpnI[dam+]  tru9I
     maeI   bpuAI            naeIII hpy188I  nseI  mnlI   bsrDI
     bfaI   aluI bslI  aluI aluI
901 AAGTATATGA CTAGAATAGC TCCACTTGG GGAAGACTTG TAGCTGAGCT GATTCGTTAC GATCTGAGGA ACATTAAAGT TGAGGGTTT ACATTGCTGT
    TTCATATACT GATCTTATCG AGGTGAACC CCTTCTGAAC ATCGACTCGA CTAAACAATG CTAGACTCCT TGTAATTCA ACTCCCAAAA TGTAACGACA

                                                        ddeI
                                                 bsp1286  tfII               dd
                                                 bmyI hpy188I                mboII
                        rsaI                      banII  mboII               bpuAI
            bsrDI       csp6I           sfcI      tsp509I  bspCNI hinfI      bbsI  bs
    tsp5091 hpyCH4V
1001 ACTCAAAAAA TTACTGGTTG CAATGTTGT CACGCTACAG GTACACCAAT AATGTTGGAC AATCAGGGG CTCAGAAGAA TCAACCACAA AATAGTCTTC
     TGAGTTTTTT AATAACCAAC GTTACAACA GTGCGATGTC CATGTGGTTA TTACAACCTG TTAGTCCCC GAGTCTTCTT AGTTGGTGTT TTATCAGAAG
```

GSeqEdit, DNA44686 [Full], page 6

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 7

```
                                                    nlaIV
                         sfaNI          banI              mnlI    bspMI
                              ddeI      styI        bseRI  hgaI
         hpy188I               bspCNI   bsaJI    tsp509I hpy188I          sspI
1101 TCACATGACC TTGACTAATA TACTCAGCAT CTTTATCACT CTTTCCTTGG CACCTAAAAG ATAATTCTCC TCTGACGCAG GTTGGAAATA TTTTTTTCTA
     AGTCTACTGG AACTGATTAT ACGAGTCGTA GAAATAGTGA GAAAGGAACC GTGGATTTTC TATTAAGAGG AGACTGCGTC CAACCTTTAT AAAAAAAGAT

                         tru9I
                         tsp509I
               apoI      tru9I          nlaIV         tru9I
               hpyCH4V tsp509I   mseI mseI   bsrI  hpy188III ecc57I  mseI          psiI
1201 TCACAGAAGT CATTTGCAAA GAATTTGAC TACTCTGCTT TTAATTAAT ACCAGTTTTC AGGAACCCCT GAAGTTTTAA GTTCACTATT CTTTATAACA
     AGTGTCTTCA GTAAACGTTT CTTAAAACTG ATGAGACGAA AATTAAATTA TGGTCAAAAG TCCTTGGGGA CTTCAAAATT CAAGTGATAA GAAATATTGT

                                                    tseI
                                                    fnu4HI/bsoFI
                                              rmaI
                                              maeI
                                    mwoI bbvI                                      ddeIM.
               hpy188I              bstAPI                    bsp1286            celII/es
          tfiI  fokI                bsp1286 aluI                       bmyI      blpI/bpu
     hinfI bstF5I             bmyI bfaI mwoI        aluI tsp509I       mnlI      aluI
1301 TTTGAGAGAA TCCGATGTAG TGATATGACA GGGCTGGGGC AAGAACAGGG GCACTAGCTG CCTTATTAGC TAATTTAGTG CCCTCCGTGT TCAGCTTAGC
     AAACTCTCTT AGGCTACATC ACTATACTGT CCCGACCCCG TTCTTGTCCC CGTGATCGAC GGAATAATCG ATTAAATCAC GGGAGGCACA AGTCGAATCG
```

GSeqEdit, DNA44686 [Full], page 7

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 8

sau3AI
mboI/ndeI[dam-]   tsp509I[M.ecoRI-]
dpnI[dam-]   ecoRI   tru9I   bs
dprI[dam+]   tru9I   apoI   mseI   bs
alwI[dam-]   mseI   hpy188I   aha1II/craI   aiuI

1401 CTTTGACCCT TTCCTTTGA TCCACAAAAT ACATTAAAAC TCTGAATTCA CATACAATGC TATTTTAAAG TCAATAGATT TTAGCTATAA AGTGCTTGAC
     GAAACTGGGA AAGGAAAACT AGGTGTTTTA TGTAATTTTG AGACTTAAGT GTATGTTACG ATAAAATTTC AGTTATCTAA AATCGATATT TCACGAACTG

                                       foki
                                       bst95I   mnlI   tru9I
                            bslI   hpy188I   hpy188III mnlI mseI

1501 CAGTAATGTG GTTGTAACTT TGTGTATGTT CCCCCACATC GCCCCCACT TCGGAIGTGG GGTCAGGAGG TTGAGGTTCA CTATTAACAA ATGCCATAAA
     GTCATTACAC CAACATTAAA ACACATACAA GGGGGTGTAG CGGGGGTTGA AGCCTACACC CCAGTCCTCC AACTCCAAGT GATAATTGTT TACAGTATTT
     tsp509I

                              hincII/hindII
                    tspRI   nlaIII
           rsaI   nspHI   mbcII   tru9I
           csp6I   nspI   eco57I   mseI   dde-
     mnlI bst4CI/hpyCH4III   hpyCH4V   mnlI   hpy188I   aseI/asnI/vspI

1601 TATCTCACAG AGGTACAGTG CCAATAGATA TTCAAATGTT GCATGTTGAC CAGAGGGATT TTATATCTGA AGAACATACA CTATTATAA ATACCTTAGA
     ATAGAGTATC TCCATGTCAC GGTTATCTAT AAGTTTACAA CGTACAACTG GTCTCCCTAA AATATAGACT TCTTGTATGT GATAATTATT TATGGAATCC

EXHIBIT A—PAGE 9

```
                                                                                          trp9I
                                                                                          mseI
                                             sau96I[M.haeIII-]
                                             hae:II/palI

                                   styI
                                   mwol ncoI[M.haeIII-]
                                   fnu4HI/bsoFI
                                   bglI[M.haeIII-]
                          sfiI  dsaI                        aluI
                          eaeI  btgI/bstDSI                 tseI
                          cfrI  bsaJI                       fnu4HI/b
                   aluI haeIII/palI                         bbvI psl
                   hindIII aciI nlaIII                      hpyCH4V

scrFI[dcm-]
pspGI
mvaI
ecoRII[dcm-]
dsaV[dcm-]
bstNI
bssKI[dcm-]
epyI[dcm+]           bst4CI/hpyCH4:II

1701 GAAAGATTTT GACCTGGCTC TAGATAAAAC TGTGGCAAGA AAAATGTAAT GAGCAATATA TGGAAACAAA CACACCTTTG TTAAAGATAA AAAAAAAAA
     CTTTCTAAAA CTGGACCGAA ATCTATTTTG ACACCGTTCT TTTTACATTA CTCGTTATAT ACCTTTATT GTGTGGAAAC AATTTCTATT TTTTTTTTT
                                   rnaI
                          thaI   naeI
                   fnuDII/mvnI
            aciI   xbaI
     fnu4HI/bsoFI
     haeII/palI          hpyCH4V
     mcrI  ple:   taqI sfcI
     eagI/xmaIII/eclXI salI pstI
     eaeI  mlyI   hincII/hindII[M;taqI-]
     cfrI  hinfI plel  ecoNI
     bsiEI drdI  mlyI  bslI
     notI bstU: hpy188III bspMI
     fnu4HI/bsoF: bfaI accI[M.taqI-]
     aciI bsh1236I hinfI[M.taqI-]  sceI
-801 AAAAAAAAA AAGGCCGGCC GCGACTCTAG AGTCGACCTG CAGTAGGGAT AACAGGGTAA TAAGCTTGGC CGCCATGGCC CAACTGTTT AGTGCAGCTT
     TTTTTTTTT TTCCCGCCGG CGCTGAGATC TCAGCTGGAC GTCATCCCTA TTGTCCCATT ATTCGAACCG GCGGTACCGG GTTGAACAAA TAACGTCGAA

190: ATAACG
     TATTAC

GSeqEdit, DNA44686 [Full], page 9
```

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 10

```
> _ength: 1906

acc? (GTMKAC):                    1832
acii (CCGC):                      452 1815 1819 1870
afliii (ACRYGT):                  77
ahaiii (TTTAAA):                  1464
alui (AGCT):                      116 175 303 741 793 918 942 947 1356 1368 1393 1483 1863 1896
alwi (GGATCNNNN):                 46 47 58 1419
apai (GGGCCC):                    338 628
apoi (RAATTY):                    27 1221 1444
apyi (CCWGG):                     111 327 345 354 434 1713
asei (ATTAAT):                    1683
asni (ATTAAT):                    1683
aspHi (GWGCWC):                   115
avai (CYCGRG):                    94 442 488
avaii (GGWCC):                    848
banHi (GGATCC):                   46
bani (GGYRCC):                    1149
banii (GRGCYC):                   115 338 628 1068
bbsi (GAAGACNNNNNN):              125 726 932 1095
bbv- (GCAGC):                     173 458 818 1357 1694
bfai (CTAG):                      53 795 911 1354 1827
bgli (GCCNNNNNGGC):               34 340 1869
blpi (GCTNAGC):                   943 1394
bnryi (GDGCHC):                   115 338 628 1068 1349 1376
bpni (CTGGAG):                    112
bpu-1C2- (GCTNAGC):               943 1394
bpuAi (GAAGACNNNNNN):             125 726 932 1095
```

GSeqEdit, DNA44686 [Full], page 10

-13-

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT A—PAGE 11

```
bsaI (GGTCTCNNNN):                   100 582
bsaJI (CCNNGG):                      9 95 317 326 327 362 434 488 489 842 1145 1873
bsaWI (NCCGGW):                      255
bseRI (GAGGAGNNNNNNNNNN):            97 1167
bsgI (GTGCAG):                       4
bsh1236I (CGCG):                     78 1820
bsiCI (TTCGAA):                      24
bsiEI (CGRYCG):                      1816
bsiHKAI (GWGCWC):                    115
bslI (CCNNNNNNNGG):                  249 633 922 1544 1837
bsmAI (GTCTC):                       100 136 245 295 582
bsmAI (GTCTC):                       100 136 245 295 582
bsmFI (GGGACNNNNNNNNNNNNNN):         847
bsmI (GAATGCN):                      349 516
bsoFI (GCNGC):                       173 456 818 1357 1815 1818 1869 1894
bsp106I (ATCGAT):                    19
bsp1201 (GGGCCC):                    338 628
bsp1286 (GDGCHC):                    115 338 628 1068 1349 1378
bsp1407I (TGTACA):                   736
bspCNI (CTCAGNNNNNNNNN):             130 142 944 964 1071 1100 1123
bspDI (ATCGAT):                      19
bspHI (TCATGA):                      395 610
bspMI (ACCTGC):                      1177 1836
bsrBI (GAGCGG):                      450
bsrDI (GCAATGNN):                    829 992 1020
bsrGI (TGTACA):                      736
bsrI (ACCGGN):                       39 390 615 633 1252 1500
bssKI (CCNGG):                       83 111 327 336 345 354 434 488 489 1713
bst4CI (ACNGT):                      556 723 1615 1729
bstAPI (GCANNNNNTGC):                1351

GSeqEdit, DNA44686 [Full], page 11
```

-14-

EXHIBIT A—PAGE 12

Enzyme	Positions
bstBI (TTCGAA):	24
bstDSI (CCRYGG):	362 842 1873
bstEII (GGTNACC):	429
bst75I (GGATG):	680 769 806 1313 1553
bstNI (CCWGG):	111 327 345 354 434 1713
bstUI (CGCG):	78 1820
bstXI (CCANNNNNNTGG):	104 1500
bst-YI (RGATCY):	46 57
btgI (CCRYGG):	362 842 1873
btsI (GCAGTGNN):	574
cacBI (GCNNGC):	194 794
cel-I (GCTNAGC):	943 1394
cfoI (GCGC):	835
cfrI (YGGCCR):	32 41 1816 1867
claI (ATCGAT):	19
csp6I (GTAC):	701 737 1041 1613
dde- (CTNAG):	130 142 895 344 964 1071 1100 1123 1395 1695
dpnI (GATC):	47 58 961 1419
dpnII (GATC):	47 58 961 1419
draI (TTTAAA):	1464
draII (RGGNCCY):	320 338 437 627 628
drdI (GACNNNNNNGTC):	72 1823
dsaI (CCRYGG):	362 842 1873
dsaV (CCNGG):	83 111 327 336 345 354 434 488 489 1713
eaeI (YGGCCR):	32 41 1816 1867
eagI (CGGCCG):	1816
ec1136II (GAGCTC):	115
ec-xI (CGGCCG):	1816
eco57I (CTGAAG):	507 542 569 659 728 789 1269 1667
ecoNI (CCTNNNNNAGG):	1837

GSeqEdit, DNA44686 [Full], page 12

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT C—PAGE 13

```
ecoO109I (RGGNCCY) :   320 338 437 627 628
ecoRI (GAATTC) :       27 1444
ecoRII (CCWGG) :       111 327 345 354 434 1713
espI (GCTNAGC) :       943 1394
fnu4HI (GCNGC) :       173 458 818 1357 1815 1818 1869 1894
fnuDII (CGCG) :        78 1820
foxI (GGATG) :         680 769 806 1313 1553
gsuI (CTGGAG) :        112
haeII (RGCGCY) :       834
haeIII (GGCC) :        35 42 321 331 339 439 465 629 1817 1868 1877
hgaI (GACGC) :         79 1174
hgiAI (GWGCWC) :       115
hhaI (GCGC) :          835
hinPI (GCGC) :         835
hincII (GTYRAC) :      1645 1832
hindII (GTYRAC) :      1645 1832
hindIII (AAGCTT) :     1862
hinfI (GANTC) :        22 138 157 243 494 877 1078 1308 1823 1830
hpaII (CCGG) :         44 83 256 336 489
hpiI (GGTGA) :         411 429 655
hpy188I (TCNGA) :      141 509 551 762 963 1072 1101 1171 1311 1441 1551 1666
hpy188III (TCNNGA) :   52 227 395 610 1259 1563 1826
hpyCH4III (ACNGT) :    556 723 1615 1729
hpyCH4V (TGCA) :       5 276 515 709 872 1019 1215 1640 1839 1893
maeI (CTAG) :          53 795 911 1354 1827
maeIII (GTNAC) :       430 956
mboI (GATC) :          47 58 961 1419
mboII (GAAGA) :        126 568 652 727 932 1075 1096 1669
ncrI (CCRYCG) :        18:6
nlaI (ACGCGT) :        77
```

GSeqEdit, DNA44686 [Full], page 13

Appl. No. : **09/931,836**
Filed : **August 16, 2001**

EXHIBIT C—PAGE 14

mlyi (GAGTCNNNNN): 136 243 1823 1830

nlII (CCTC): 9 50 62 68 97 144 170 209 259 310 342 441 445 678 687 810 966 982

nseI (TTAA): 1169 1382 1567 1573 1610 1653

nsiI (CAYNNNNRTG): 974 1241 1246 1277 1434 1465 1584 1684 1781

mspI (CCGG): 675

mvaI (CCWGG): 44 83 256 336 489

mvnI (CGCG): 111 327 345 354 434 1713

nxoI (GCNNNNNNNGC): 78 1820

nciI (CCSGG): 34 108 164 304 313 340 452 516 525 733 1351 1360 1869

rcoI (CCATGG): 83 336 488 489

ndeII (GATC): 362 842 1873

nheI (GCTAGC): 47 58 961 1419

niaIII (CATG): 794

niaIV (GGNNCC): 161 239 291 363 396 462 521 611 665 675 734 780 843 1642 1874

noiI (GCGGCCGC): 46 321 338 384 402 437 465 627 628 629 847 1149 1262

nspH (RCATGY): 1815

nspI (RCATGY): 733 1641

paeR7I (CTCGAG): 733 1641

paI (GGCC): 442

pleI (GAGTCNNNN): 33 42 321 331 339 439 465 629 1817 1868 1877

pspAI (CCCGGG): 138 243 1823 1830

pspGI (CCWGG): 1293 1899

pspOMI (GGGCCC): 488

psi-I (CTGCAG): 111 327 345 354 434 1713

rcaI (TCATGA): 338 628

rmaI (CTAG): 275 1838

rsaI (GTAC): 395 610

eaci (GAGCTC): 53 795 911 1354 1827
701 737 1041 1613
115

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT C—PAGE 15

sall (GTCGAC): 1832

sau3AI (GATC): 47 58 961 1419

sau96I (GGNCC): 321 330 338 339 438 465 628 629 848 1877

sceI (TAGGGATAACAGGGTAAT): 1844

scrFI (CCNGG): 83 111 327 336 345 354 434 488 489 1713

sfaNI (GCATC): 87 1127

sfcI (CTRYAG): 275 299 1035 1838

sfiI (GGCCNNNNNGGCC): 33 1868

sfuI (TTCGAA): 24

smaI (CCCGGG): 488

snaI (CTYRAG): 442

ssp-(AATATT): 1187

sstI (GAGCTC): 115

styI (CCWWGG): 317 362 842 1145 1873

taqI (TCGA): 20 25 64 70 308 443 1833

tfiI (GAWTC): 22 157 494 877 1078 1308

thaI (CGCG): 78 1820

tliI (CTCGAG): 442

trr9I (TTAA): 974 1241 1246 1277 1434 1465 1584 1684 1781

tseI (GCNGC): 173 458 818 1357 1694

tsp45I (GTSAC): 430

tsp509I (AATT): 28 1009 1061 1163 1222 1243 1372 1445 1516

tspRI (NNCAGTGNN): 38 389 557 575 1616

vspI (ATTAAT): 1683

xbaI (TCTAGA): 52 1826

xcmI (CCANNNNNNNNNTGG): 317 362

xhoI (CTCGAG): 442

xhoII (RGATCY): 46 57

xmaI (CCCGGG): 488

xmaIII (CGGCCG): 1816

GSeqEdit, DNA44686 [Full], page 15

-18-

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT C—PAGE 16

not found:

aatII(GACGTC),acc65I(GGTACC),accIII(TCCGGA),aclI(AACGT),acyI(GRCGYC),afeI(AGCGCT),aflII(CTTAAG),ageI(ACCGGT),
ahaI(GRCGYC),ahdI(GACNNNNGTC),alw44I(GTGCAC),alwNI(CAGNNNCTG),apaLI(GTGCAC),ascI(GGCGCGCC),
asp700(GAANNNNTTC),asp718(GGTACC),aspI(GACNNNGTC),avaIII(ATGCAT),aviII(TGCGCA),avrII(CCTAGG),
bceI(NNNNNNNNNNNNACNNNNGTAYCNNNNNNNNNN),baII(TGGCCA),bbrPI(CACGTG),bceAI(ACGGCNRNRNNNNNNN),
bcgI(NNNNNNNNNNNNNCGANNNNNNTGCNNNNNNNNNNNN),bciVI(GTATCC),bclI(TGATCA),bfrBI(ATGCAT),bfrI(CTTAAG),bglII(AGATCT),
blnI(CCTAGG),bsaAI(YACGTR),bsa3I(GATNNNNATC),bsaHI(GRCGYC),bsaXI(NNNNNNNRNNNNACNNNNNCTCCNNNNNNNNNNN),bsiW(CGTACG),
bsmBI(CGTCTCNNNN),bspCI(CGATCG),bspEI(TCCGGA),bspMII(TCCGGA),bsrFI(RCCGGY),bssHII(GCGCGC),bss6I(CTCGTG),
bst1107I(GTATAC),bst1171(GTATAC),bsu36I(CCTNAGG),btr(CACGTC),cfr10I(RCCGGY),cpoI(CGGWCCG),cspI(CGGWCCG),
draIII(CACNNNGTG),eam1105I(GACNNNNGTC),earI(CTCTCNNNN),eciI(GGCGGA),ecc47III(AGCGCT),eco72I(CACGTG),
eco81I(CCTNAGG),ecoRV(GATATC),eheI(GGCGCC),esp3I(CGTCTC),fseI(GGCCGGCC),fspI(TGCGCA),hinII(GRCGYC),hpaI(GTTAAC),
hpy99I(CGNCG),hpyCH4IV(ACGT),kasI(GGCGCC),kpnI(GGTACC),ksp632I(CTCTTCNNNN),kspI(CCGCGG),maeII(ACGT),
nanI(GATNNNNATC),mfeI(CAATTG),mroI(TCCGGA),msc(TGGCCA),nsiI(ATGCAT),nspBII(CMGCKG),pacI(TTAATTAA),pciI(ACATGT),
narI(GGCGCC),ndeI(CATATG),ngoMI(GCCGGC),nruI(TCGCGA),nsiI(ATGCAT),nspBII(CMGCKG),pacI(TTAATTAA),pciI(ACATGT),
pflFI(GACNNNGTC),pflMI(CCANNNNNTGG),pmeI(GTTTAAAC),pmlI(CACGTG),ppu10I(ATGCAT),ppuMI(RGGWCCY),pshAI(GACNNNNGTC),
psp1406I(AACGTT),pvuI(CGATCG),pvuII(CAGCTG),rsrII(CGGWCCG),sacI(CCGCGG),sacII(CCGCGG),sanDI(GGGWCCC),sapI(GCTCTTCNNNN),
sauI(CCTNAGG),sbfI(CCTGCAGG),sca(AGTACT),sexAI(ACCWGGT),sgfI(GCGATCGC),sgrAI(CRCCGGYG),snaBI(TACGTA),snoI(GTGCAC),
srmI(GTGCAC),speI(ACTAGT),sphI(GCATGC),splI(CGTACG),srfI(GCCCGGGC),sse8387I(CCTGCAGG),sstII(CCGCGG),stuI(AGGCCT),
swaI(ATTTAAAT),taiI(ACGT),tth111I(GACNNNGTC),xmnI(GAANNNNTTC)

EXHIBIT B

(4 pages; page 21-24)

EXHIBIT B—PAGE 1

Protein Request [HELPDESK]

[NEW REQUEST] [SEARCH] [PRODUCTION HISTORY]

PRODUCTION HISTORY UNQ ▾ 753 Search ☐

UNQ753 Human CTRP3 Poly-His

	Order Protein	Trans-Fec DNA	EXP System	FormalName	PRO	Protein Reqds	EXP	PUR	PUR Status	PUR Warning	Culture Vol(L)
1.	Order	DNA84665	E Coli	Human CTRP3 Poly-His	PRO1825		EXP2247	PUR1009	Done		
2.	Order	DNA84665	E Coli	Human CTRP3 Poly-His	PRO1825		EXP2247	PUR4414	Done		
3.	Order	DNA87982	Baculovirus	Human CTRP3 IgG	PRO1855		EXP2255	PUR1039	Drop		1
4.	Order	DNA102368	Mammalian Stable	Human CTRP3 Poly-His	PRO4365		EXP2794				

EXHIBIT B—PAGE 2

GENEN GENES

SITEMAP | Additional

GENE VIEWER | GENE | FAM | MAP | GENEHUB
SEQUENCE VIEWER | DNA | SRC | RNA | LIB | FLS | OLI
ASSAY VIEWER | PRO | DOM | EXP | PUR | LOT | ASY

SELECT | Go

EXP2247 | View DNA | View Protein | Update Record

Gene Info: UNQ753 PRO 1825 Human CTRP3 Poly-His TFDNA84665 FLDNA44686

EXP Lab Name:
DNA Lab Name: pE44686-1
Protein Request ID:
System: E Coli
Expetd Harvest Date:
Control:
Fermentation Run ID:
Cell Line:
Expression Media:
Growth Factors:
Supplements:
Warning:

Harvest Date:
Cell Pellet:
Cell Banking ID:
E Coli Strain:
Days Incubated:
Transfection Date:
Transfer Date:
Transfer Volume:

Gels:

PUR(s): PUR1009 11/16/98
PUR4414 11/16/01

Expressed: FALSE
Comments:
Status:
Date Entered: November 9, 1998
Date Canceled:
Scientist: Dan Yansura
Notebook: 0 -
Protein Lots:

Date Complete:
Cancel Reason:
Status:
Storage Location:

LOT2552 PIN1308-1

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT B—PAGE 3

GENENGENES   SITEMAP   Additional F

GENE VIEWER   GENE   FAM   MAP   GENEHUB   Pub   New   Updates

SEQUENCE VIEWER   DNA   SRC   RNA   LIB   FLS   OLI

ASSAY VIEWER   PRO   DOM   EXP   PUR   LOT   ASY   SELECT

EXP2255   View Notes   View Protein id   Update Record

Gene Info	UNQ753 PRO 1855 Human CTRP3 IgG TFDNA87982 FLDNA44686
EXP Lab Name	44686.221 JSF
DNA Lab Name	44686.221JSF Hif
Protein Request id	
System	Baculovirus
Virus Status	
Expctd Virus Harvest Date	
Expctd Harvest Date	
Control	
Fermentation Run ID	
Cell Line	High5
Expression Media	
Growth Factors	ESF921
Supplements	
Warning	
Gels	
Expressed	TRUE
Comments	
Status	
Date Entered	November 9, 1998
Date Canceled	
Scientist	Bethanne Deuel
Notebook	0 -
Protein Lots	

Virus Harvest Date	
Harvest Date	
Cell Pellet	
Cell Banking bx	
E Coli Strain	
# Days Incubated	3
Transfection Date	
Transfer Date	
Transfer Volume	1liter(s)
PUR(s)	PUR1039 11/23/98

Date Complete	
Cancel Reason	
Status	
Storage Location	

No LOTs for this EXPression

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

-23-

EXHIBIT B—PAGE 4

GENEN GENES	SITEMAP Additional I
GENE VIEWER	GENE FAM MAP GENEHUB Find New Update
SEQUENCE VIEWER	SRC RNA LIB FLS OLI
ASSAY VIEWER	DOM EXP PUR LOT ASY SELECT Go
EXP2794	View DNA View Protein p3 Update Record

Gene Info	UNQ753 PRO 4365 Human CTRP3 Poly-His TFDNA102368 FLDNA44686		
EXP Lab Name	sst.44686.H8		
DNA Lab Name	sst.44686.H8		
Protein Request ID			
System	Mammalian Stable		
Expold Harvest Date		Harvest Date	
Control		Cell Pellet	
Fermentation Run ID		Cell Banking ID	
Cell Line	CHO	Cell Strain	
Expression Media		# Days Incubated	
Growth Factors	PS24	Transfection Date	February 17, 1999
Supplements		Transfect Date	
Warning		Transfer Volume	
Gels	GEL180	PUR(s)	
	GEL181		
Expressed	FALSE		
Comments	no band on western		
Status			
Date Entered	February 16, 1999	Date Complete	
Date Canceled		Cancel Reason	
Scientist	Lhney Lewis-Steiner	Status	Drop
Notebook	30966 - 55	Storage Location	Crowley Lab
Protein Lots			
	No LOTs for this EXPression		

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT C

(2 pages; pages 26-27)

EXHIBIT C—PAGE 1

GENEN GENES   SITEMAP Additional F

GENE VIEWER   GENE FAM MAP GENENUM
SEQUENCE VIEWER   DNA SRC RNA LIB FLS OLI
ASSAY VIEWER   PRO DOM EXP PUR LOT ASY   SELECT ▾   Go

PUR1009   View DNA   View Protein   Update Record

Gene Info   UNQ753 PRO 1825 Human CTRP3 Poly-His TF DNA84665 FL DNA44686

Protein Request ID

DNA Lab Name   pE44686-1   Protein Formal Name

PUR Name   Control

Export PUR Date   PUR Date   July 13, 1999

EXP   EXP2247   No Sequence report available

Mass Spec   Sequence Info

Warning   SDS   GEL461

Endotoxin Level   6.24 EU/ml   AA Analysis mg/ml

SLS Molar Mass (g/mol)   OD 280

Ext.Coef. (mg/ml)⁻¹ cm⁻¹   Endotoxin units/mg Protein

Prot A mg/ml   ProtA ppm

Reduced SDS MW   Approx. 31, 55 kDa

Theoretical MW of ORF#1   26723.56

Gel Score

Buffer   1 mM HCl / 0.15 M NaCl / 4% mannitol

Comments

Status

Date Entered   November 16, 1998   PUR Done Date

Yield Concentration 4752 nM   Yield Volume   4.5ml

Date Cancelled   Cancel Reason

Scientist   Corpuz, Racquel   Status   Done

Delivered To   Length

Notebook   32647-8-   Storage Location

Protein Lots

OT2552   PIN1308-1   1009

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT C—PAGE 2

GENENGENES | SITEMAP | Additional Resources: ⬥

GENE VIEWER | GENE | FAM | MAP | GENEHUB | Find New Update
SEQUENCE VIEWER | DISC | SRC | RNA | LIB | PLS | OLI | SELECT ⬥ [   ] Go
ASSAY VIEWER | SPEC | DOM | EXP | PUR | LOT | ASY |

PUR1009

View DNA ss. | View Protein p1. | Update Record

Gene Info	UNQ753 PRO 1825 Human CTRP3 Poly-His TF DNA84665 FL DNA44686		
Protein Request ID			
DNA Lab Name	pE44686-1	Protein Formalname	
PUR Name		Control	
Expctd. PUR Date		PUR Date	July 13, 1999
EXP	EXP2247	No Sequence report available	
Mass Spec		Sequence Info	
Warning		GELS	GEL461
Endotoxin Level	6.24 EU/ml	AA Analysis(mg/ml)	
LLS Molar Mass (g/mol)		OD 280	
Ext.Coef. (mg/ml)$^{-1}$(cm)$^{-1}$		Endotoxin Units/mg Protein	
Prot A ng/ml		Prot A ppm	
Reduced SDS MW	Approx. 31, 55 kDa		
Theoretical MW of ORF#1	26723.56		
Gel Score			
Buffer	1 mM HCl / 0.15 M NaCl / 4% mannitol		
Comments			
Status			
Date Entered	November 16, 1998	PUR Done Date	
Yield Concentration	4752 nM	Yield Volume	4.5ml
Date Canceled		Cancel Reason	
Scientist	Coruz, Racquel	Status	Done
Delivered To		Origin	
Notebook	32647-8-	Storage Location	
Protein Lots			
LOT2552	PIN1308-1	1009	

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGanes | SAGE

GenenGenes Feedback

EXHIBIT D

(3 pages; pages 29-31)

Appl. No.   :   09/931,836
Filed   :   August 16, 2001

EXHIBIT D—PAGE 1

GENENTRESS

GENE VIEWER | GENE FEAT MAP GENEHUB
SEQUENCE VIEWER | DNA SEQ RNA ALG FLG OLI
ASSAY VIEWER | PRO DOM EXP PROT LOT ASY

SELECT | Additional Resources:

LOT2552

Gene Info: UNQ753 PRO1825 Human CTRP3 Poly-His DNA84665 PUR1009 EXP2247

Investigator/Lot Name: PIN1308-1

Control:

Initial Volume:

Comments: some comment

Status:

Date Entered: August 5, 1999

Date Garbeled:

Garbel Reason:

Registry:

Available: Yes

Storage Location:

Related Protein Lots:

LOT	DNA	PRO	PUR	LOT Name	Protein Formal Name
	DNA84665	PRO1825	PUR1009	PIN1308-1	Human CTRP3 Poly-His

Assay/ LOT Distribution

ASY	Status	Distribution Date	Result Date	Assay Name
ASY1	Retired	9/28/99	11/5/99	Heart Neonatal Hypertrophy
ASY8	Running	4/21/00	5/23/00	Endothelial cell proliferation
ASY9	Running	4/21/00	5/23/00	Inhibition of VEGF stimulated endothelial cell growth
ASY24	Retired	9/2/99	9/28/99	MLR - Stimulatory
ASY32	Retired	11/4/99	12/14/99	Guinea pig Proinflammatory activity [hairless]
ASY33	Running	12/10/01		Miscellaneous
ASY34	On Hold	9/14/99	11/8/99	Hu Venous Endothelial Cell c-fos Induction Assay
ASY51	Retired	11/4/99	12/14/99	Guinea pig Vascular Constrictor activity [hairless]

Appl. No. : 09/931,836
Filed : August 16, 2001

EXHIBIT D—PAGE 2

ASY64	11/4/99	Retired	12/14/99	Proinflammatory/PMN infiltrate
ASY67	9/2/99	Retired	9/28/99	MLR - Inhibitory
ASY68	10/18/99	On Hold	11/8/99	Hu Venous Endothelial Cell Ca Flux Assay
ASY74	9/28/99	Retired	11/8/99	Inhibition of Heart Neonatal Hypertrophy induced by LIF+ET-1
ASY75	9/28/99	Retired	11/8/99	Enhancement of Heart Neonatal Hypertrophy induced by LIF+I
ASY100	8/20/99	Running		Endotoxin Level (LAL)
ASY103	9/1/99	Running		Protein Gel Analysis
ASY106	10/2/99	Retired	12/1/99	Glucose and FFA uptake in Differentiated Skeletal Muscle
ASY106	12/3/99	Retired	1/4/00	Glucose and FFA uptake in Differentiated Skeletal Muscle
ASY107	11/16/99	Running	1/4/00	Fetal hemoglobin induction in an erythroblastic cell line
ASY110	10/22/99	Retired	11/10/99	Chondrocytes Re-differentiation Assay
ASY110	12/1/99	Retired	4/5/00	Chondrocytes Re-differentiation Assay
ASY110	12/15/99	Retired	3/27/00	Chondrocytes Re-differentiation Assay
ASY110	5/2/00	Retired	8/18/00	Chondrocytes Re-differentiation Assay
ASY110	5/16/00	Retired	8/18/00	Chondrocytes Re-differentiation Assay
ASY111	10/22/99	Retired	11/10/99	Chondrocyte Proliferation Assay
ASY111	12/1/99	Retired	4/5/00	Chondrocyte Proliferation Assay
ASY111	12/15/99	Retired	3/27/00	Chondrocyte Proliferation Assay
ASY111	5/2/00	Retired	8/18/00	Chondrocyte Proliferation Assay
ASY111	5/16/00	Retired	8/18/00	Chondrocyte Proliferation Assay
ASY118	1/12/00	Retired	2/1/00	Inhibition of A -Peptide Binding to Factor VIIA
ASY119	1/12/00	Retired	2/1/00	Inhibition of A - Peptide Binding to Factor VIIE
ASY128	5/5/00	Retired	6/20/00	Cytokine Release in Human Whole Blood
ASY129	5/16/00	Retired	8/18/00	Chondrocytes re-differentiation by Fluorescence
ASY130	5/16/00	Retired	8/18/00	Chondrocyes Proliferation by fluorescence
ASY132	6/23/00	Retired	8/7/00	Activation of NFkb
ASY134	10/13/00	Retired	11/30/00	Activatin of NfkB [Luciferase]
ASY134	12/5/00	Retired	1/22/01	Activatin of NfkB [Luciferase]
ASY135	9/12/00	Retired	10/19/00	Induction of E-selectin
ASY138	2/23/01	Running	4/9/01	Normal Human Iliac Artery Endothelial cells

Appl. No.　　　:　　09/931,836
Filed　　　　　:　　August 16, 2001

EXHIBIT D—PAGE 3

ASY139	Running	2/23/01	4/9/01	Pooled Human Umbilical vein Endothelial cells
ASY140	Running	2/23/01	4/9/01	Coronary artery Smooth Muscle cells
ASY141	Running	2/23/01	4/9/01	Normal human Dermal Fibroblast Proliferation
ASY142	Running	2/14/01	3/26/01	NF-kappa B Inhibition Assay
ASY142	Running	3/8/01	3/26/01	NF-kappa B Inhibition Assay
ASY146	Running	7/19/01	8/3/01	Human Microvascular Endothelial Cell Proliferation Assay
ASY162	Running	11/16/99	9/5/00	NCI Oncology Screen-1
ASY165	Running	8/1/01	9/19/01	CREB
ASY165	Running	9/19/01	9/24/01	CREB
ASY170	Piloting	11/9/01	11/16/01	NHEK proliferation assay
ASY174	Piloting	3/12/02	4/3/02	Bovine Retinal M Endothelial
ASY174	Piloting	4/4/02		Bovine Retinal M Endothelial
ASY174	Piloting	5/17/02		Bovine Retinal M Endothelial
ASY174	Piloting	11/20/02		Bovine Retinal M Endothelial
ASY175	Running	12/21/01		Neuronal Differentiation using Rinat technology
ASY175	Running	5/30/02		Neuronal Differentiation using Rinat technology
ASY176	Piloting	5/31/02		Heamoglobin Assay
ASY176	Piloting	7/16/02		Heamoglobin Assay
ASY177	Piloting	4/22/03	8/18/03	fibroblast migration assay
ASY178	Running	1/23/03		Proliferation of Fibroblasts
ASY180	Running	3/11/03	3/25/03	Mouse Keratinocyte Assay
ASY181	Running	3/6/03	3/13/03	Human Mammary Epithelial Cell Assay

ASY | RNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | VNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT E

(2 pages; pages 33-34)

EXHIBIT E—PAGE 1

ASY	Assay Name	PUR/EXP/DNA	LOT Name	PIN Name	Verified	Conc	Concentration Units	Act	UNQ	Protein Name	Date Diff	Date Compl	25 Inhib
ASY10	Chond Rediffn	PUR1009	LOT2552	PIN1308-1		47.50	nM	45.11		UNQ753	Human CTRP3 Poly-His	10/22/1999	11/10/1999
ASY10	Chond Rediffn	PUR1009	LOT2552	PIN1308-1		47.50	nM	72.58		UNQ753	Human CTRP3 Poly-His	12/15/1999	03/27/2000
ASY10	Chond Rediffn	PUR1009	LOT2552	PIN1308-1		47.50	nM	82.13		UNQ753	Human CTRP3 Poly-His	05/16/2000	08/18/2000

ASY | DNA | DOM | EXP | FAM | FLS | LIB | LOT | MAP | OLI | PRB | PRO | PUR | RNA | SRC | UNQ | XPT | YST
Assay Viewer | Sequence Viewer | Gene Viewer | GenenGenes | SAGE

GenenGenes Feedback

EXHIBIT E—PAGE 2